



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES

- Please note our new name -
Department of Environmental Protection
D E P

Lee Park, Suite 6010
555 North Lane
Conshohocken, PA 19428-2233
August 30, 1995

(610) 832-6200

Southeast Regional Office

Mr. Charles Root (3HW21)
United States Environmental Protection Agency
841 Chestnut Building
Philadelphia, PA 19107-4431

Re: AIW Frank/Mid-County Mustang NPL Site, NPDES Discharge

Dear Mr. Root,

This letter provides the Department's response to your request (7/25/95) for discharge limits based on alternative outfall locations.

Reference is made to the enclosed detail of a topographic map showing the AIW Frank/Mid-County Mustang NPL Site ("Site"). The EPA requested limits for the following locations, marked on the map:

- A: Intermittent portion of West Valley Creek
- B: On-Site pond
- C: Nearby pond on the former Church Farm School property

Discharge limits for on-site reinjection of the treated groundwater would be the same as those for A and B.

The effluent limits developed originally were for a discharge point located at the confluence of Valley Creek and a small unnamed tributary ("UNT"). That workup assumed that Valley Creek and the UNT were both perennial upstream of that point, so for the mass balance equation the Q7-10 flow at the point was based on the total drainage area above that point.

The alternative discharge locations are all within that original drainage area, so the Q7-10 flow at any of the alternatives is less than the original point (if it is assumed that the streams are perennial) which translates to lower effluent limits.



If the portion of Valley Creek shown as A on the enclosed map is intermittent, then the effluent limits become equal to the criteria because "intermittent" indicates that, at times, stream flow goes to zero, so zero is used in the mass balance.

For discharge scenario B, to a pond located on Valley Creek, we should still view it as a discharge to the intermittent portion of Valley Creek, so that limits are the same as A.

For discharge scenario C, to a pond on the UNT to Valley Creek, if the UNT is assumed to be perennial, then the drainage area above the discharge point would be used to calculate Q7-10 for use in the mass balance equation (DA is approximately 0.531 square miles, therefore cfm is approximately 0.065 cfs).

The enclosed tables summarize discharge limits. Where the associated comment is "Raw is low", EPA's estimated concentration in the raw discharge is lower than the in-stream criterion, and no additional treatment would be needed.

Sincerely,



David Ewald
Project Officer
Hazardous Sites Cleanup Program

cc: R. Zang
G. Danyliw
B. Bloomfield
D. Becker
A. Tremont

AR303259

AIW Frank/Mid-County Mustang NPL Site

Parameter	Effluent Limit Discharge pt. A mg/l	Effluent Limit Discharge pt. B mg/l	Effluent Limit Discharge pt. C mg/l	Comments
Alkalinity (CaCO3)	No	No	No	No criteria
Ammonia as N	No	No	No	Raw is low
Chemical Oxygen Demand	No	No	No	No criteria
Chlorides				
Nitrates+Nitrites, as N	No	No	No	10 allowable
pH, standard units	6 to 9	6 to 9	6 to 9	
Sulfates as SO4	No	No	No	342 allowable
Total Dissolved solids	1000	1000	1000	DRBC
Total organic Carbon	No	No	No	No criteria
Total Suspended Solids	30	30	30	DRBC
Eh	No	No	No	No criteria
Biological Oxygen Demand	No	No	No	Raw is low
	ug/l	ug/l	ug/l	
Vinyl Chloride	0.02	0.02	0.021	
Trichlorofluoromethane	No	No	No	No criteria
1,1-Dichloroethane	No	No	No	No criteria
Carbon Disulfide	No	No	No	No criteria
Acetone	No	No	No	Raw is low
Methylene Chloride	No	No	No	Raw is low
Trans-1,2-dichloroethene	No	No	No	No criteria
1,1-Dichloroethane	No	No	No	No criteria
Cis-1,2-dichloroethene	No	No	No	No criteria
1,1,1-Trichloroethane	No	No	No	Raw is low
1,2-Dichloroethane	No	No	No	Raw is low
Trichloroethene	3	3	3.2	
1,2-Trichloropropane	No	No	No	Raw is low
Toluene	No	No	No	Raw is low
1,1,2-Trichloroethane	No	No	No	Raw is low

AR303261

Parameter	Effluent Limit Discharge pt. A ug/l	Effluent Limit Discharge pt. B ug/l	Effluent Limit Discharge pt. C ug/l	Comments
Tetrachloroethene	No	No	No	Raw is low
Ethyl Benzene	No	No	No	Raw is low
M- and p-xylene isomers	No	No	No	Raw is low
1,2,4-Trimethyl benzene	No	No	No	No criteria
Phenol				
2-Methyl phenol	No	No	No	No criteria
4-Methylphenyl	No	No	No	No criteria
2-Methylnaphthene	No	No	No	No criteria
Diethyl phthalate	No	No	No	Raw is low
Di-n-butyl phthalate	No	No	No	Raw is low
Butylbenzyl phthalate	No	No	No	Raw is low
Dimethylethylphenol	No	No	No	No criteria
Ethylnapthalene	No	No	No	No criteria
Dimethyl benzene	No	No	No	No criteria
2-Ethylhexanoic acid	No	No	No	No criteria
2-Methylnapthalene	No	No	No	No criteria

AR303262

Parameter	Effluent Limit Discharge pt. A ug/l	Effluent Limit Discharge pt. B ug/l	Effluent Limits Discharge pt. C ug/l	Comments
Aluminum	500	500	526	
Arsenic	0.02	0.02	0.02	
Barium	No	No	No	Raw is low
Cadmium	10	10	10.5	
Chromium	11	11	11.7	Hex
Copper	11.8	11.8	12.6	
Iron	1500	1500	1598	
Lead	3.2	3.2	3.3	
Magnesium	No	No	No	No criteria
Manganese	No	No	No	Raw is low
Mercury	0.012	0.012	0.01	
Nickel	No	No	No	Raw is low
Potassium	No	No	No	No criteria
Sodium	No	No	No	Raw is low
Vanadium	No	No	No	Raw is low
Zinc	106	106	112	

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